


Puget Sound Regional Trip Planner

- ⌘ *WSDOT Public Transportation Workshop*
- ⌘ *Travel Options and Internet Resource Tools*
- ⌘ *8/24/05*
- ⌘ *Park Woodworth*
- ⌘ *King County Metro*

What is automated trip planning?



- Transit trip planning answers the question “how do I get from here to there on transit?” (on time, faster, in a wheelchair, etc.)
- Traditionally, customers call for this information. Call centers use paper-based sources to answer questions
- Automated trip planning harnesses technology to assist the call center.
- With a few modifications, the same information can be provided directly via the Web.

Overview



- Goal: improve transit usage in the region through better, more consistent transit information that is easier to obtain
- Method: bring automated transit trip planning to King, Pierce, and Snohomish County transit information call centers
- Result: telephone staff in any of the partner transit agencies can generate plan trips for locations throughout the region
- Funds: Largely funded from FTA sources

History



- 1995 – Assess user needs. Develop RFP
- 1996 – Publish RFP and evaluate responses
- 1997 – Evaluate demonstration versions of top three responders to the RFP.
Let contract.
- 1998 – Receive first versions, implement and test
- 1999 – First agency goes live
- 2000 – Implementation at other agencies. KC Metro begins work on Web-based version
- 2001 – Second and third agencies go live, begin work on Web versions. KC Metro's Web version goes live.
- 2002 - Regional integration in production in call centers
- 2003 - Implemented on the Web in Peirce and King Counties
- 2004 - Implemented on the Web in Snohomish County

Regionalization



⌘ Process

- Each Agency implements the local version of ATIS and is satisfied as to its performance
- Data sets from each agency are shared. The individual agencies create the unified regional data set
- More volatile information such as exceptions to service are shared on an hourly basis

Regionalization



⌘ Timeline

- October 2001 – Begin regional integration and testing
- July 2002 – Complete testing. Resolve data discrepancies
- August 2002 – Start using regional data in call centers
- Early 2003 - Offer regional trip plans on the web
- Early 2005 - Add Washington State Ferries

Regionalization



⌘ Impediments

- Transit data – each agency had challenges in getting valid, reliable data
- Map data – there is no integrated map of the region. There are discontinuities at the county boundaries

KC Metro's implementation

- Trip planning answers the question “how do I get from here to there on transit?”
- In order to ***automate*** answers a great deal of information must be maintained, integrated and manipulated.
- Three components: Times that transit runs
Places transit stops
Locations transit serves
- Metro maintains much of the necessary data in three databases.

KC Metro's implementation

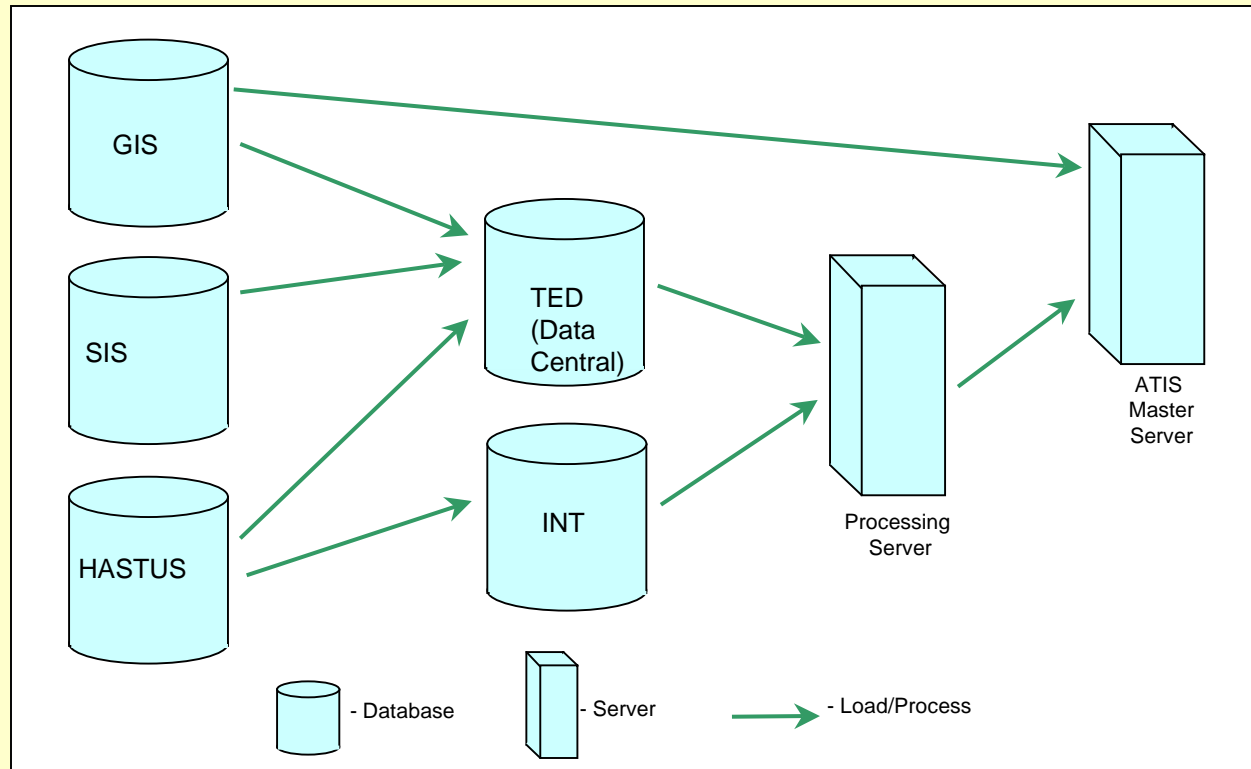


⌘ Data sources

- TIMES - The HASTUS scheduling system maintains routes, route schedules, the sequence of trips that constitute a block of work, and much more.
- STOPS - Stop Information data are maintained in the SIS database.
- LOCATIONS - KC Metro's GIS provides ATIS with base map information, such as streets, addresses, and landmarks.
- DATA CENTRAL - KC Metro centralizes data from the three sources into one large database. ATIS accesses tables in this database for most of its data. Some comes directly from the GIS.

KC Metro's implementation

⌘ Data sources



KC Metro's implementation



⌘ Data challenges

- Legacy systems not designed to work together
- Data quality in several systems less than desired for ATIS
- Internal organization
- Funding

KC Metro's implementation



⌘ Desktop Version

- Runs on PCs using Windows
- Provided to KC Metro's Rider Information staff
- Gives location-specific information – closest stops, routes serving the location, times for routes, nearest landmarks, and a map
- Plans trips by entering locations, time, and other parameters
- Trip plans give each leg of the trip, walking directions, fare, and a map of the entire itinerary
- Also provides service exception information, route timetables, reference information, and messaging

KC Metro's implementation

Desktop Version

ATIS for Windows v. 5.9.2

File Edit Trip Planning Tools Window Help

Origin: 4735 BROOKLYN AVE NE Area: SEATTLE Destination: REGIONAL JUSTICE CENTER Area: KENT/RENTON

Time: Depart at: 9:00 AM Date: 3/23/01 Friday Max Walk: 0.4 Minimize: Time Transfers Walking Fare Mode: Any Bus Only No Express Rail Only Trip Options: Accessible Trip Required

Itinerary Response from 4735 BROOKLYN AVE NE to REGIONAL JUSTICE CENTER

Itinerary from 4735 BROOKLYN AVE NE to REGIONAL JUSTICE CENTER on Friday, 3/23

Walk 0.1 miles SE from Origin to
Depart UNIVERSITY WY NE @ NE 47 ST <SB, FS> At 07:11 AM On 73 Downtown Seattle Express
Arrive INT'L DIST STA @ BAY C <SB, AT> At 07:31 AM
Transfer to
Depart INT'L DIST STA @ BAY C <SB, AT> At 07:40 AM On 150 Auburn
Arrive W SMITH ST @ 4 AV N <EB, FS> At 08:27 AM
Walk 0.2 miles NW to the Destination

Walking directions
from W SMITH ST & 4 AV N <EB, FS>
to REGIONAL JUSTICE CENTER
Walk a short distance W on W SMITH ST.
Turn right on 4TH AVE N.
Walk 1 block N on 4TH AVE N.
Turn left on REGIONAL JUSTICE CTR RD.
Walk 2 blocks W on REGIONAL JUSTICE CTR RD.
Total walking is 0.23 miles.

Fare Breakdown

Route	Operator	Fare	Transfer	Reduced	Reduced Transfer
73	MT	\$1.75	\$0.00	\$0.25	\$0.00
150	MT	\$0.00	\$0.00	\$0.00	\$0.00

Total Trip Time: 01:16 Regular Fare: \$1.75
Est Walk Time: 00:10 Reduced Fare: \$0.25

Summary
Bus \$1.75
Rail \$0.00
Transfers \$0.00
Total \$1.75

Map
Mail/Fax

1:14 PM 3/23/01 mstrtpm1 RWD harreld

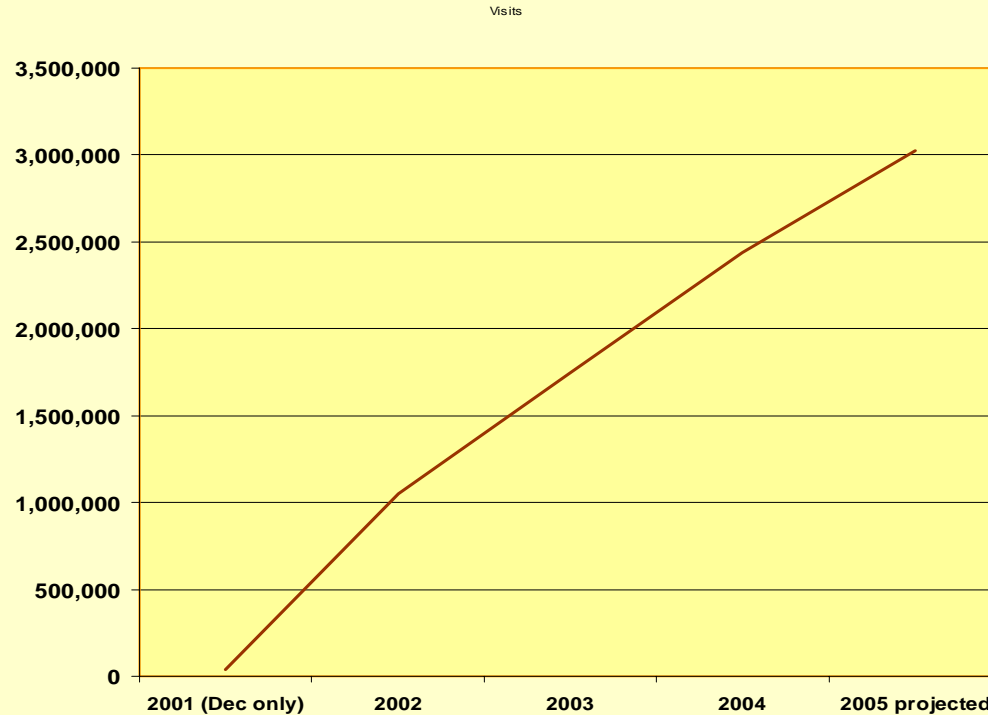
KC Metro's implementation

⌘ Web Version

- Access via Metro Online (<http://transit.metrokc.gov/>)
- Uses the same data and search engine as the desktop version
- For a given location offers closest stops, routes serving the location, and times for routes
- Plans trips by entering locations, trip time, and other parameters
- Offers specialty queries "Commuter Trip Plan" and "Point to Point Scheules"
- Offers extensive Help and FAQ
- Service exceptions, timetables, and general information provided in other parts of Metro Online

KC Metro's implementation

⌘ Web Version Visits Since Inception



KC Metro's implementation

⌘ Web Version Sample Page

King County Metro Transit Trip Planner
Itineraries from
NE 45TH ST & 15TH AVE NE to REGIONAL JUSTICE CENTER
(Service on Wednesday, 8/17/05)

[Send Feedback About These Results](#)

[Plan Return Trip](#) [Revise Original Entries](#)

Itinerary #1

[Walk 0.1 mile NW from NE 45TH ST & 15TH AVE NE to](#)

Depart	University Way NE & NE 47th St	At 06:44 AM	On Route MT 72 Downtown Seattle Express
Arrive	Westlake Sta AcRd & Tunnel Station-BAY C	At 06:56 AM	


Transfer to

Depart	Westlake Sta AcRd & Tunnel Station-BAY C	At 07:01 AM	On Route MT 150 Auburn
Arrive	W James St & 4th Ave N	At 07:53 AM	

[Walk 0.2 mile SW to REGIONAL JUSTICE CENTER](#)

Regular Fare:	Senior/Disabled Fare with Permit:	About Fares and Transfers
\$ 2.00	\$ 0.50	

The Future



- Web enhancements such as maps
- Potential to add entities – Kitsap Transit and agencies in the North Sound, for example
- New delivery systems - web enabled cell phones, telephone-based trip planning
- WSDOT and ODOT statewide trip planning